

WHAT IS CLAIMED IS:

1. A polyurethane dispersion comprising a mixture of a polyisocyanate and a molecule having hydrogen active moieties, optionally a chain extender and/or a surfactant wherein the polyisocyanate comprises a bis(isocyanatomethyl)cyclohexane compound.

5 2. The dispersion of Claim 1 wherein the polyisocyanate comprises (i) trans-1,4-bis(isocyanatomethyl)cyclohexane or (ii) an isomeric mixture of two or more of cis-1,3-bis(isocyanatomethyl)cyclohexane, trans-1,3-bis(isocyanatomethyl)cyclohexane, cis-1,4-bis(isocyanatomethyl)cyclohexane and trans-1,4-bis(isocyanatomethyl)cyclohexane, 10 with the proviso said isomeric mixture comprises at least about 5 weight percent of said trans-1,4-bis(isocyanatomethyl)cyclohexane.

15 3. The dispersion of Claim 2 wherein the polyurethane is dispersed in an aqueous medium.

4. The dispersion of Claim 3 wherein the aqueous medium contain less than 5 percent residual organic solvent.

15 5. The dispersion of Claim 1 wherein the molecule having hydrogen active moieties is a polyol or polyol blend having a weight average molecular weight of 300 to 10,000 and an average functionality of 1.8 to 4.5.

20 6. The dispersion of Claim 5 wherein the polyol is an aliphatic or aromatic polyol selected from a polyester, a polyether, polylactone, polyolefin, polycarbonate or a blend thereof.

7 7. The dispersion of Claim 1 wherein the dispersion contains a polyamine chain extender.

25 8. The dispersion of Claim 7 wherein the chain extender is selected from piperazine, ethylenediamine or bis(aminomethyl)cyclohexane.

9. The dispersion of Claim 1 wherein the dispersion contains 30 to 75 weight percent solids.

10. The dispersion of Claim 1 wherein the dispersion contains an anionic, ionic, cationic or zwitterionic external surfactant.

30 11. The dispersion of Claim 1 wherein the dispersion is stabilized by means of an internal surfactant.

12. A method of producing a polyurethane dispersion comprising mixture a polyisocyanate and a molecule having hydrogen active moieties, optionally a chain extender and/or a surfactant wherein the polyisocyanate comprises a bis(isocyanatomethyl)cyclohexane compound.

5 13. A coating, film, elastomer or microcellular foam produced from the dispersion of Claim 1.

14. A ultraviolet or light stable coating, film or elastomer produced from the dispersion of Claim 1.

10 15. The dispersion of claim 2 wherein the polyisocyanate contains 0.1 to 20 percent by weight of at least one polyisocyanate other than bis(isocyanatomethyl)cyclohexane.